



# Montana Fish, Wildlife & Parks

## Crucial Areas Assessment



### NATIVE GAME SPECIES

#### Big Game Winter Range Habitat

**SUMMARY:** This layer depicts the relative value of habitats providing big game winter range for elk, white-tailed deer, mule deer, antelope and moose.

**MEASUREMENT UNIT:** Public land survey sections - approximately one square mile.

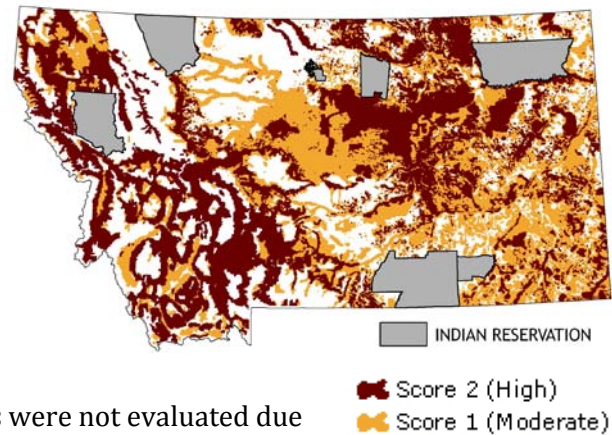
**MAPPING CONSIDERATIONS:** Indian reservations were not evaluated due to a lack of data. National park lands are not currently represented in big game distribution layers and therefore have lower than expected values in some areas.

#### DATA SOURCE(S) / QUALITY:

**Big Game:** *Metric Evaluated:* Winter range habitat value. *Species:* pronghorn antelope, elk, moose, mule deer and white-tailed deer. *Data Layers:* big game distribution - publicly available for individual species, maintained by FWP. Layers are updated using expert knowledge, which includes known habitat associations and extrapolation from survey data. Resolution is based upon 1 square mile public land survey sections; Montana land cover classification – draft layer maintained by the Montana Natural Heritage Program (NHP) Spatial Analysis Lab, University of Montana. Classification based upon remote sensing. Resolution is 30 meters

**METHODS:** Big game habitat values were determined by assigning points based on species use and habitat quality. All winter habitat was assigned an initial score of 1 and an additional point was assigned for more highly valued areas. Following is a description areas that were assigned higher values. In the western mountains, areas identified as winter use in the species distribution layers received one point. In the Northwest (FWP Region 1) winter use of elk or white-tail deer was given an additional point. In the Southwest (FWP Regions 2 & 3), elk or mule deer was given an additional point. For the rest of the state, areas identified as winter use areas for one species received a point

and an additional point if the area was winter range for additional species. Also, sagebrush grassland habitats were used to identify important habitats in the prairie environment where winter ranges are less distinct. Areas containing >50% sagebrush grassland, received one point and areas containing >75% sagebrush grassland were given an additional point. The final summed value was rescaled to 0 to 1 before being combined with the other species categories.



#### DATA SOURCES

- ☐ Survey data – counts or estimates
- ☐ Survey data – categorical (e.g. presence/absence)
- ☒ Expert opinion based on observation

#### DATA EXTRAPOLATION TECHNIQUE USED

- ☐ None
- ☐ Modeling of habitat-species associations (deductive)
- ☐ Statistical modeling (inductive)
- ☐ Extrapolation to habitat unit (e.g. stream section)
- ☒ Extrapolation based on expert opinion



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**FINAL CATEGORIZATION:** The resulting scores ranged from 0 to 2. A score of 0 indicates the area was not identified as having winter range present. A score of 1 indicates important winter range habitats. A score of 2 indicates highly valued winter range habitats. Big game winter range was given twice the value of the other species groups for the calculation of the cumulative native game layer.

CATEGORY	PERCENT OF STATE
SCORE 2 (High)	35.6 %
SCORE 1 (Moderate)	30.0 %

**CONTACT:** Adam Messer, FWP – Data Services Section; 406.444.0095; [amesser@mt.gov](mailto:amesser@mt.gov)

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